



# PRESERVE HIGHLIGHTS

VOLUME 4 | ISSUE 2

## Spotlight

The Fernald Preserve, which is located on 1,050 acres in northwest Hamilton County, was established following cleanup and ecological restoration of the former Fernald uranium foundry.

The \$14 million ecological restoration incorporated native plants and grasses that were identified in an 1819 land survey. The current landscape features 400 acres of woodlots, 327 acres of prairie, 140 acres of open water and wetlands, and 33 acres of savanna. A diverse array of wildlife is already well established at the preserve.



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## Site Inspections



Routine site inspections are a critical aspect of the Office of Legacy Management's mission at the Fernald Preserve. The inspections, during which an inspector examines the site by "walking down" a specific portion of the property, are conducted quarterly to ensure the continued viability of Fernald's environmental cleanup. Site inspections assess the impacts of erosion and frost, and detect the presence of burrowing animals and unwanted plants that could compromise the site's environmental restoration.

Additional information on site inspections and the state of Fernald's restoration is available in the recently released 2009 Site Environmental Report, where all of the site's environmental monitoring activities are discussed in detail. The report is available on the Fernald Preserve Web page at [www.LM.doe.gov](http://www.LM.doe.gov).

**November 27**  
**Turkey Walk**  
**and Talk**  
**All day**

Fernald Preserve Visitors Center  
 7400 Willey Road  
 Harrison, Ohio 45030



10995 Hamilton-Cleves Hwy.  
 Harrison, Ohio 45030  
 (513) 648-6000  
[fernaldd@LM.doe.gov](mailto:fernaldd@LM.doe.gov)



**Did you know...**

The ecologically diverse Fernald Preserve property once housed over 300 buildings as the site of the Feed Materials Production Center, which produced high-purity uranium metal as the first step in America's nuclear weapons production cycle.

# Legacy Management Goals

## Goal 1

Protect human health and the environment through effective and efficient long-term surveillance and maintenance.

## Goal 2

Preserve, protect, and make accessible legacy records and information.

## Goal 3

Support an effective and efficient work force structured to accomplish Departmental missions and assure contractor worker pension and medical benefits.

## Goal 4

Manage legacy land and assets, emphasizing protective real and personal property reuse and disposition.

## Goal 5

Improve program effectiveness through sound management.



## Legacy Management's Mission:

To manage the Department's post-closure responsibilities and ensure the future protection of human health and the environment. Legacy Management has control and custody for legacy land, structures, and facilities and is responsible for maintaining them at levels consistent with Departmental long-term plans.



## Meeting the Mission

**Goal 1:** Education is an important aspect of the Fernald Preserve's mission. We are expanding our environmental curricula to meet the needs of area educators. Our educational program provides hands-on experience for students at all grade levels and introduces them to a variety of subjects related to the natural world. Groundwater, reptiles and amphibians, forest, prairie life, and birds are examples of topics students can explore at the Fernald Preserve. The curricula comply with the educational grade-level achievement standards established by the Ohio Department of Education. During the last school year, over 900 students from 49 different classes took advantage of the educational activities offered at the Fernald Preserve. Opportunities to collect biological data have drawn schools back to the site to conduct valuable research. For three consecutive years, a senior honors seminar class from Northwest High School has been using the Fernald Preserve as an outdoor laboratory. The class has focused its studies on amphibian populations in mitigated wetlands. Valuable data gathered by the students has been cataloged and added to Fernald's ecological database.

## Fun Fact

One of the Fernald Preserve's most interesting species is also one of its smallest. The ruby-throated hummingbird weighs only one-eighth of an ounce and has wings that beat 53 times per second. It can fly at speeds of up to 50 miles per hour. Its heart beats 1,200 times per minute, giving it one of the highest metabolisms in the animal kingdom.

## Nature Nook



Bird watchers *Homo sapiens*

The habitat diversity at the Fernald Preserve has attracted a wide variety of birds, mammals, and insects. For the past three years, the Fernald Preserve has participated in the Ohio Breeding Bird Atlas project, which documents the type and distribution of breeding birds within Ohio. Data collected at Fernald and other locations throughout the state is submitted to project coordinators at Ohio State University. The data is used to identify important habitats that support high species diversity and to collect detailed information on the status of Ohio's rare, threatened, and endangered birds. To date, over 200 bird species have been identified at

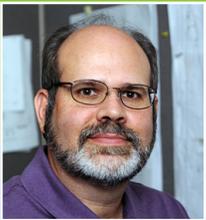
the Fernald Preserve, and 92 breeding species have been documented.

Birds aren't the only creatures that have been counted at the Fernald Preserve. Fernald was recently selected as a site for Hamilton County's butterfly count. Staff members from the Hamilton County Park District conduct the butterfly count annually to identify the types and locations of butterflies within the county. Participants in the butterfly count noted that Fernald's prairie grasses and wildflowers are particularly attractive to butterflies, and they documented 42 different species during the count. 



## Visitors Center

In addition to its popularity as a destination for area educators, the Fernald Preserve Visitors Center has become a venue for hosting meetings by local organizations. The Fernald Preserve staff is planning a series of monthly activities that will expand the use of the Visitors Center and solidify the site as a community asset. Building on the success of the Egg-stravaganza, Star Watch, and Goodness Snakes programs, the Fernald Preserve will be hosting a series of educational activities and events for all age groups, which will attract even more visitors to the site. The next event—Let's Talk Turkey—is scheduled for November 27. Information on additional programs and activities will be available soon. 



## Individual Effort

**Ken Broberg** –  
Hydrologist

Ken Broberg began working as a hydrogeologist at Fernald in 1990. His knowledge and expertise were needed during the environmental-investigation phase of the Great Miami Aquifer cleanup. As part of the cleanup's core team, his responsibilities included assessing the impact of site operations on the aquifer, helping to develop the strategies and plans for the cleanup, and helping to develop models to evaluate the cleanup of the aquifer. Although all above- and below-grade remediation was completed in December 2006, the aquifer's restoration is ongoing, and Ken continues to contribute to this last outstanding cleanup effort at the Fernald site.

Ken interprets groundwater analytical data and water levels as part of the continuing implementation of the ongoing groundwater cleanup and in support of the site's larger Legacy Management mission. His data analysis,

in part, determines if the remedy remains protective of the environment. The continuity that Ken has brought to groundwater cleanup has increased efficiency and provided invaluable insight to the project. According to Ken, "Uranium concentrations within the contaminated area are continuing to decrease in response to the site's pumping and treating activities." Remedy progress is reported in the Site Environmental Reports, which documents all aspects of Fernald's environmental monitoring program.

Ken's work is not limited to the Fernald Preserve. He is also involved in the inspection and management of several other LM sites across the country from Puerto Rico to Texas, many of which have active groundwater monitoring activities.

Ken has a master's degree in geology from the Ohio State University and a master's degree in business administration from Colorado State University. He began his environmental career at the Waste Isolation Pilot Plant in Carlsbad, New Mexico, where he held the position of principal investigator for the site's groundwater monitoring program prior to his work at Fernald. 



## PRESERVE HIGHLIGHTS



As a community asset, the Fernald Preserve will foster wildlife habitat and provide educational opportunities through environmental stewardship.

## Community Relations

The staff at the Fernald Preserve is available to address local organizations on a variety of topics relating to the site's history, present mission, groundwater restoration, birds, prairie restoration and management, wildlife, and green building construction. Our audiences include professional organizations; garden clubs; members of senior centers; Scouts; and a wide range of classes, from the elementary level through the college level.

The Fernald Preserve maintains an active public outreach program with schools, local conservation organizations, community groups, and elected officials. We hope that you will consider the preserve as a destination. If your organization is interested in reserving the Community Meeting Room, please contact us at (513) 648-6000.

## Think Green

E-mail [fernalld@LM.doe.gov](mailto:fernalld@LM.doe.gov) if you would like to receive this quarterly newsletter electronically.